

ELECTRICAL COMMUNICATION

VOLUME 24

1947

Published Quarterly by the
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION
67 BROAD STREET, NEW YORK 4, N.Y., U.S.A.

SUBJECT AND TITLE INDEX.

	NUMBER	PAGE
Admittance, Shunted-Amplifier Input. A. Shadowitz.....	4	468
Aerial Navigation: Simultaneous Radio Range and Radiotelephone Equipment. George T. Royden	3	374
Aeronautical Radio: Landing Aircraft with Ground Radar. J. S. Engel.....	1	72
Aeronautical Radio: Medium-Power Multichannel Communication Transmitters. B. T. Ellis.....	4	433
Aeronautical Radio: Simultaneous Radio Range and Radiotelephone Equipment. George T. Royden.....	3	374
Aeronautical Radio: Survey of Radio Navigational Aids. Robert I. Colin.....	2	219
Africa, SOJ-12 Open-Wire Carrier Telephone Systems in South. D. P. J. Retief and H. J. Barker	3	310
Aircraft with Ground Radar, Landing. J. S. Engel.....	1	72
Alexander Graham Bell—Scientist. F. J. Mann.....	1	3
Amplifier Input Admittance, Shunted-. A. Shadowitz.....	4	468
Amplifiers, Exact Design and Analysis of Double- and Triple-Tuned Band-Pass. Milton Dishal..	3	349
Angola Radio Network. Carlos Pelaez.....	3	283
Anomalous Attenuation in Waveguides. John Kemp.....	3	342
A-N Range: Simultaneous Radio Range and Radiotelephone Equipment. George T. Royden.....	3	374
Antennas: Investigation of Errors in Spaced-Collector Direction-Finder Systems. T. H. Clark...	2	199
Army Field Telephone System, Pulse-Time-Modulation Link for. N. H. Young.....	3	297
Atomic Bomb: Bikini Observations and Their Significance. Haraden Pratt and Arthur Van Dyck	1	66
Attenuation in Waveguides, Anomalous. John Kemp.....	3	342
Automatic Switching: Speech-Input Equipment of Brussels Broadcasting House. Fernand Mortiaux.....	4	415
Automobile: Mobile Frequency-Modulation 30-44-Megacycle Equipment. R. B. Hoffman and E. W. Markow.....	2	170
Band-Pass Amplifiers, Exact Design and Analysis of Double- and Triple-Tuned. Milton Dishal..	3	349
Band-Pass Filters, Extension of Norton's Method of Impedance Transformation to. Vitold Belevitch.....	1	59
Beam Dispersion at High Vacuum by Ions, Control of Electron-. Lester M. Field, Karl Spangenberg, and Robert Helm.....	1	108
Beam Tubes, Cathode-Design Procedure for Electron-. Robert Helm, Karl Spangenberg, and Lester M. Field.....	1	101
Behaviour of Telephone Exchange Traffic Where Non-Equivalent-Choice Outlets Are Commoned. E. P. G. Wright.....	1	42
Belgium: Speech-Input Equipment of Brussels Broadcasting House. Fernand Mortiaux.....	4	415
Bell, Alexander Graham,—Scientist. F. J. Mann.....	1	3
Bikini Observations and Their Significance. Haraden Pratt and Arthur Van Dyck.....	1	66
Biography: Alexander Grahama Bell—Scientist. F. J. Mann.....	1	3
Biography: In Memoriam—Henry Mark Pease.....	3	409
Bomb, Atomic: Bikini Observations and Their Significance. Haraden Pratt and Arthur Van Dyck	1	66
British Post Office, Progress of Telecommunication Services in.....	3	300
Broadcasting House, Speech-Input Equipment of Brussels. Fernand Mortiaux.....	4	415
Broadcasting, Monitor for Frequency-Modulation. M. Silver.....	4	428
Broadcast Transmitters for 88-108 Megacycles, Frequency-Modulated. Leonard Everett.....	1	82
Brussels Broadcasting House, Speech-Input Equipment of. Fernand Mortiaux.....	4	415
Cable and Equipment for U.S.S.R., Carrier-Frequency Submarine. E. S. McLaren and G. H. Gray	2	209
Cable, France—England Submarine, (1939) and Paris—Calais Cable. A. Fromageot.....	1	24
Calais—Paris Cable, France—England Submarine Cable (1939) and. A. Fromageot.....	1	24
Carrier-Frequency Submarine Cable and Equipment for U.S.S.R. E. S. McLaren and G. H. Gray	2	209
Carrier Telephone Systems in South Africa, SOJ-12 Open-Wire. D. P. J. Retief and H. J. Barker	3	310
Cathode-Design Procedure for Electron-Beam Tubes. Robert Helm, Karl Spangenberg, and Lester M. Field.....	1	101
Cathode-Ray Tubes: Cathode-Design Procedure for Electron-Beam Tubes. Robert Helm, Karl Spangenberg, and Lester M. Field.....	1	101
Cathode-Ray Tubes: Control of Electron-Beam Dispersion at High Vacuum by Ions. Lester M. Field, Karl Spangenberg, and Robert Helm	1	108
Cathode-Ray-Tube Sweep: Variable-Frequency Two-Phase Sine-Wave Generator. T. H. Clark and V. F. Clifford.....	3	382
C.C.I.F.: Comité Consultatif International Téléphonique. P. E. Erikson.....	2	198

I N D E X T O V O L U M E 2 4

	NUMBER	PAGE
C.C.I.F. Honors Two Pioneers.....	1	123
Circular Sweep: Variable-Frequency Two-Phase Sine-Wave Generator. T. H. Clark and V. F. Clifford.....	3	382
Coaxial Lines: Theory and Design of the Reflectometer. B. Parzan and A. Yalow.....	1	94
Comité Consultatif International Radio: Technical Coordination on an International Basis in Communication and Allied Fields. E. M. Deloraine.....	1	55
Comité Consultatif International Télégraphique: Technical Coordination on an International Basis in Communication and Allied Fields. E. M. Deloraine.....	1	55
Comité Consultatif International Téléphonique. P. E. Erikson.....	2	198
Comité Consultatif International Téléphonique: C.C.I.F. Honors Two Pioneers.....	1	123
Comité Consultatif International Téléphonique: Modernization of International Telephone Service, and Its Reaction on National Telephone Systems. E. P. G. Wright.....	4	436
Comité Consultatif International Téléphonique: Technical Coordination on an International Basis in Communication and Allied Fields. E. M. Deloraine.....	1	55
Communication Systems: Angola Radio Network. Carlos Pelaez.....	3	283
Communication Systems: Technical Coordination on an International Basis in Communication and Allied Fields. E. M. Deloraine.....	1	55
Communication Transmitters, Medium-Power Multichannel. B. T. Ellis.....	4	433
Control of Electricity Supply Systems, Operational. W. Kidd and E. M. S. McWhirter.....	3	324
Control of Electron-Beam Dispersion at High Vacuum by Ions. Lester M. Field, Karl Spangenberg, and Robert Helm.....	1	108
Convention, Institute of Radio Engineers 1947.....	2	263
Coordination: Modernization of International Telephone Service, and Its Reaction on National Telephone Systems. E. P. G. Wright.....	4	436
Coordination on an International Basis in Communication and Allied Fields, Technical. E. M. Deloraine.....	1	55
Coupling: Exact Design and Analysis of Double- and Triple-Tuned Band-Pass Amplifiers. Milton Dishal.....	3	349
Cross-Talk Balancing: France-England Submarine Cable (1939) and Paris-Calais Cable. A. Fromageot.....	1	24
Crystals and Their Symmetry, Physical Properties of. Marcel Tournier.....	4	478
Dielectric Susceptance: Physical Properties of Crystals and Their Symmetry. Marcel Tournier.....	4	478
Dimensional Analysis Applied to Very-High-Frequency Triodes. Gerard Lehmann.....	3	391
Direction Finders: Survey of Radio Navigational Aids. Robert I. Colin.....	2	219
Direction Finders: Variable-Frequency Two-Phase Sine-Wave Generator. T. H. Clark and V. F. Clifford.....	3	382
Direction-Finder Systems, Investigation of Errors in Spaced-Collector. T. H. Clark.....	2	199
Direction Finding: Simultaneous Radio Range and Radiotelephone Equipment. George T. Royden.....	3	374
Direct-Reading Traffic Recorder, Portable. August F. Jones.....	2	195
Double- and Triple-Tuned Band-Pass Amplifiers, Exact Design and Analysis of. Milton Dishal.....	3	349
Duplexing: Pulse-Time-Modulation Link for Army Field Telephone System. N. H. Young.....	3	297
Electricity Supply Systems, Operational Control of. W. Kidd and E. M. S. McWhirter.....	3	324
Electron-Beam Dispersion at High Vacuum by Ions, Control of. Lester M. Field, Karl Spangenberg, and Robert Helm.....	1	108
Electron-Beam Tubes, Cathode-Design Procedure for. Robert Helm, Karl Spangenberg, and Lester M. Field.....	1	101
Electronic Switch: Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
England-France Submarine Cable (1939) and Paris-Calais Cable. A. Fromageot.....	1	24
Errors in Spaced-Collector Direction-Finder Systems, Investigation of. T. H. Clark.....	2	199
Exact Design and Analysis of Double- and Triple-Tuned Band-Pass Amplifiers. Milton Dishal.....	3	349
Exchange Traffic: Portable Direct-Reading Traffic Recorder. August F. Jones.....	2	195
Exchange Traffic where Non-Equivalent-Choice Outlets are Commoned, Behavior of Telephone. E. P. G. Wright.....	1	42
Extension of Norton's Method of Impedance Transformation to Band-Pass Filters. Vitold Belevitch.....	1	59
Filters at Cut-Off Frequencies, Insertion Loss and Effective Phase Shift in Composite. Vitold Belevitch.....	2	192
Filters: Exact Design and Analysis of Double- and Triple-Tuned Band-Pass Amplifiers. Milton Dishal.....	3	349

E L E C T R I C A L C O M M U N I C A T I O N

	NUMBER	PAGE
Filters, Extension of Norton's Method of Impedance Transformation to Band-Pass. Vitold Belevitch.....	1	59
Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
France-England Submarine Cable (1939) and Paris-Calais Cable. A. Fromageot.....	1	24
Frequematic Modulator: Frequency-Modulated Broadcast Transmitters for 88-108 Megacycles. Leonard Everett.....	1	82
Frequency Measurement: Monitor for Frequency-Modulation Broadcasting. M. Silver.....	4	428
Frequency-Modulated Broadcast Transmitters for 88-108 Megacycles. Leonard Everett.....	1	82
Frequency-Modulated Transmitters, Triodes for 3- and 10-Kilowatt. P. I. Corbell, Jr. and H. R. Jacobus.....	2	187
Frequency-Modulation Broadcasting, Monitor for. M. Silver.....	4	428
Frequency-Modulation Radio Link, Paris-Montmorency 3000-Megacycle. A. G. Clavier and G. Phelizon.....	2	159
Frequency-Modulation 30-44-Megacycle Equipment, Mobile. R. B. Hoffman and E. W. Markow.....	2	170
Frequency Modulator: Shunted-Amplifier Input Admittance. A. Shadowitz.....	4	468
Frequency-Shift Keying in the I. T. & T. System.....	2	262
Generator, Variable-Frequency Two-Phase Sine-Wave. T. H. Clark and V. F. Clifford.....	3	382
Gill, Sir Frank: C.C.I.F. Honors Two Pioneers.....	1	123
Goniometers: Investigation of Errors in Spaced-Collector Direction-Finder Systems. T. H. Clark.....	2	199
Goniometers: Variable-Frequency Two-Phase Sine-Wave Generator. T. H. Clark and V. F. Clifford.....	3	382
Great Britain: Progress of Telecommunication Services in British Post Office.....	3	300
Ground-Controlled Approach: Landing Aircraft with Ground Radar. J. S. Engel.....	1	72
Ground Radar, Landing Aircraft with. J. S. Engel.....	1	72
History: Alexander Graham Bell—Scientist. F. J. Mann.....	1	3
Impedance Balancing: France-England Submarine Cable (1939) and Paris-Calais Cable. A. Fromageot.....	1	24
Impedance Mismatch: Theory and Design of the Reflectometer. B. Parzan and A. Yalow.....	1	94
Impedance Transformation to Band-Pass Filters, Extension of Norton's Method of. Vitold Belevitch.....	1	59
In Memoriam—Henry Mark Pease.....	3	409
Input Admittance, Shunted-Amplifier. A. Shadowitz.....	4	468
Insertion Loss and Effective Phase Shift in Composite Filters at Cut-Off Frequencies. Vitold Belevitch.....	2	192
Institute of Radio Engineers 1947 Convention.....	2	263
Instrument Landing of Aircraft: Landing Aircraft with Ground Radar. J. S. Engel.....	1	72
Insulation: Yarn-Numbering System. A. A. New.....	1	40
International Basis in Communication and Allied Fields, Technical Coordination on an. E. M. Deloraine.....	1	55
International Telephone Service, and Its Reaction on National Telephone Systems, Modernization of. E. P. G. Wright.....	4	436
Inverse Feedback: Paris-Montmorency 3000-Megacycle Frequency-Modulation Radio Link. A. G. Clavier and G. Phelizon.....	2	159
Investigation of Errors in Spaced-Collector Direction-Finder Systems. T. H. Clark.....	2	199
Ions, Control of Electron-Beam Dispersion at High Vacuum by. Lester M. Field, Karl Spangenberg, and Robert Helm.....	1	108
Keying in the I. T. & T. System, Frequency-Shift.....	2	262
Landing Aircraft with Ground Radar. J. S. Engel.....	1	72
Mackay Radio and Telegraph Company: Tangier Radio Station.....	2	208
Medium-Power Multichannel Communication Transmitters. B. T. Ellis.....	4	433
Medium-Power Triode for 600 Megacycles. S. Frankel, J. J. Glauber, and J. P. Wallenstein.....	2	179
Microwave Radio Relay Systems. E. Labin.....	2	131
Mobile Frequency-Modulation 30-44-Megacycle Equipment. R. B. Hoffman and E. W. Markow.....	2	170
Modernization of International Telephone Service, and Its Reaction on National Telephone Systems. E. P. G. Wright.....	4	436
Modulation: Frequency-Shift Keying in the I. T. & T. System.....	2	262
Modulation Link for Army Field Telephone System, Pulse-Time-. N. H. Young.....	3	297
Modulation Measurement: Monitor for Frequency-Modulation Broadcasting. M. Silver.....	4	428
Modulation: Paris-Montmorency 3000-Megacycle Frequency-Modulation Radio Link. A. G. Clavier and G. Phelizon.....	2	159

I N D E X T O V O L U M E 2 4

	NUMBER	PAGE
Modulation, Pulse-Count. D. D. Grieg.....	3	287
Modulation: Pulse-Time-Modulated Multiplex Radio Relay System—Radio-Frequency Equipment. D. D. Grieg and H. Gallay.....	2	141
Monitor for Frequency-Modulation Broadcasting. M. Silver.....	4	428
Montmorency 3000-Megacycle Frequency-Modulation Radio Link, Paris. A. G. Clavier and G. Phelizon.....	2	159
Multichannel Communication Transmitters, Medium-Power. B. T. Ellis.....	4	433
Multiplexing: Pulse-Count Modulation. D. D. Grieg.....	3	287
Multiplex Radio Relay System—Radio-Frequency Equipment, Pulse-Time-Modulated. D. D. Grieg and H. Gallay.....	2	141
Muri, Dr. A.: C.C.I.F. Honors Two Pioneers.....	1	123
National Telephone Systems, Modernization of International Telephone Service, and Its Reaction on. E. P. G. Wright.....	4	436
Navigational Aids, Survey of Radio. Robert I. Colin.....	2	219
Navigation: Simultaneous Radio Range and Radiotelephone Equipment. George T. Royden.....	3	374
Network, Angola Radio. Carlos Pelaez.....	3	283
Networks: Exact Design and Analysis of Double- and Triple-Tuned Band-Pass Amplifiers. Milton Dishal.....	3	349
Networks: Extension of Norton's Method of Impedance Transformation to Band-Pass Filters. Vitold Belevitch.....	1	59
Networks: Insertion Loss and Effective Phase Shift in Composite Filters at Cut-Off Frequencies. Vitold Belevitch.....	2	192
Norton's Method of Impedance Transformation to Band-Pass Filters, Extension of. Vitold Belevitch.....	1	59
Numbering System, Yarn. A. A. New.....	1	40
Obituary: In Memoriam—Henry Mark Pease.....	3	409
Open-Wire Carrier Telephone Systems in South Africa, SOJ-12. D. P. J. Retief and H. J. Barker.....	3	310
Operational Control of Electricity Supply Systems. W. Kidd and E. M. S. McWhirter.....	3	324
Oscillator, Relaxation: Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
Paris-Calais Cable, France—England Submarine Cable (1939) and. A. Fromageot.....	1	24
Paris-Montmorency 3000-Megacycle Frequency-Modulation Radio Link. A. G. Clavier and G. Phelizon.....	2	159
Pease, Henry Mark, In Memoriam.....	3	409
Phase Shift in Composite Filters at Cut-Off Frequencies, Insertion Loss and Effective. Vitold Belevitch.....	2	192
Physical Properties of Crystals and Their Symmetry. Marcel Tournier.....	4	478
Piezoelectricity: Physical Properties of Crystals and Their Symmetry. Marcel Tournier.....	4	478
Portable Direct-Reading Traffic Recorder. August F. Jones.....	2	195
Power Measurement: Theory and Design of the Reflectometer. B. Parzan and A. Yalow.....	1	94
Power Systems: Operational Control of Electricity Supply Systems. W. Kidd and E. M. S. McWhirter.....	3	324
Program Distribution: Speech-Input Equipment of Brussels Broadcasting House. Fernand Morniau.....	4	415
Progress of Telecommunication Services in British Post Office.....	3	300
Propagation of Waves: Anomalous Attenuation in Waveguides. John Kemp.....	3	342
Propagation of Waves: France—England Submarine Cable (1939) and Paris-Calais Cable. A. Fromageot.....	1	24
Propagation of Waves: Microwave Radio Relay Systems. E. Labin.....	2	131
Propagation of Waves: Pulse-Time-Modulated Multiplex Radio Relay System—Radio-Frequency Equipment. D. D. Grieg and H. Gallay.....	2	141
Pulse-Count Modulation. D. D. Grieg.....	3	287
Pulse-Time-Modulated Multiplex Radio Relay System—Radio-Frequency Equipment. D. D. Grieg and H. Gallay.....	2	141
Pulse-Time-Modulation Link for Army Field Telephone System. N. H. Young.....	3	297
Pyroelectricity: Physical Properties of Crystals and Their Symmetry. Marcel Tournier.....	4	478
Radar, Landing Aircraft with Ground. J. S. Engel.....	1	72
Radio Network, Angola. Carlos Pelaez.....	3	283
Radio Range and Radiotelephone Equipment, Simultaneous. George T. Royden.....	3	374
Radiotelephone Equipment, Simultaneous Radio Range and. George T. Royden.....	3	374

E L E C T R I C A L C O M M U N I C A T I O N

	NUMBER	PAGE,
Railway Crossings, Flashing Signal for. V. C. Meeuws.....	3	406
Reactors, Saturated: Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
Recorder, Portable Direct-Reading Traffic. August F. Jones.....	2	195
Reflectometer, Theory and Design of. B. Parzan and A. Yalow.....	1	94
Relaxation Oscillator: Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
Relays: Pulse-Count Modulation. D. D. Grieg.....	3	287
Relays: Pulse-Time-Modulation Link for Army Field Telephone System. N. H. Young.....	3	297
Relay Station, Tangier Radio.....	2	208
Relay System—Radio-Frequency Equipment, Pulse-Time-Modulated Multiplex Radio. D. D. Grieg and H. Gallay.....	2	141
Relay Systems, Microwave Radio. E. Labin.....	2	131
Remote Control: Operational Control of Electricity Supply Systems. W. Kidd and E. M. S. McWhirter.....	3	324
Resistive Distributor: Variable-Frequency Two-Phase Sine-Wave Generator. T. H. Clark and V. F. Clifford.....	3	382
Review: Progress of Telecommunication Services in British Post Office.....	3	300
Russia: Carrier-Frequency Submarine Cable and Equipment for U.S.S.R. E. S. McLaren and G. H. Gray.....	2	209
Saturated Reactors: Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
Selective-Calling Radio: Mobile Frequency-Modulation 30-44-Megacycle Equipment. R. B. Hoffman and E. W. Markow.....	2	170
Selecto Call: Mobile Frequency-Modulation 30-44-Megacycle Equipment. R. B. Hoffman and E. W. Markow.....	2	170
Shunted-Amplifier Input Admittance. A. Shadowitz.....	4	468
Signal for Railway Crossings, Flashing. V. C. Meeuws.....	3	406
Similitude: Dimensional Analysis Applied to Very-High-Frequency Triodes. Gerard Lehmann....	3	391
Simultaneous Radio Range and Radiotelephone Equipment. George T. Royden.....	3	374
Sine-Wave Generator, Variable-Frequency Two-Phase. T. H. Clark and V. F. Clifford.....	3	382
SOJ-12 Open-Wire Carrier Telephone Systems in South Africa. D. P. J. Retief and H. J. Barker..	3	310
South Africa, SOJ-12 Open-Wire Carrier Telephone Systems in. D. P. J. Retief and H. J. Barker	3	310
Spaced-Collector Direction-Finder Systems, Investigation of Errors in. T. H. Clark.....	2	199
Speech-Input Equipment of Brussels Broadcasting House. Fernand Mortiau.....	4	415
Standardization: Modernization of International Telephone Service, and Its Reaction on National Telephone Systems. E. P. G. Wright.....	4	436
Standardization: Technical Coordination on an International Basis in Communication and Allied Fields. E. M. Deloraine.....	1	55
Standardization: Yarn-Numbering System. A. A. New.....	1	40
Statistics of the World, Telephone.....	1	122
Submarine Cable and Equipment for U.S.S.R., Carrier-Frequency. E. S. McLaren and G. H. Gray	2	209
Submarine Cable (1939) and Paris-Calais Cable, France-England. A. Fromageot.....	1	24
Supervisory Systems: Operational Control of Electricity Supply Systems. W. Kidd and E. M. S. McWhirter.....	3	324
Survey of Radio Navigational Aids. Robert I. Colin.....	2	219
Switch, Electronic: Flashing Signal for Railway Crossings. V. C. Meeuws.....	3	406
Switching: Speech-Input Equipment of Brussels Broadcasting House. Fernand Mortiau.....	4	415
Tangier Radio Relay Station.....	2	208
Technical Coordination on an International Basis in Communication and Allied Fields. E. M. Deloraine.....	1	55
Telecommunication Services in British Post Office, Progress of.....	3	300
Telex: Frequency-Shift Keying in the I. T. & T. System.....	2	262
Telex: Telephone Statistics of the World.....	1	122
Telemetering: Operational Control of Electricity Supply Systems. W. Kidd and E. M. S. McWhirter	3	324
Telephone: Link, Paris—Montmorency 3000-Megacycle Frequency-Modulation Radio. A. G. Clavier and G. Phelizon.....	2	159
Telephone Link, Radio: Pulse-Time-Modulation Link for Army Field Telephone System. N. H. Young.....	3	297
Telephone Services: Progress of Telecommunication Services in British Post Office.....	3	300
Telephone Statistics of the World.....	1	122
Telephone System, Pulse-Time-Modulation Link for Army Field. N. H. Young.....	3	297

INDEX TO VOLUME 24

	NUMBER	PAGE
Telephone Systems in Various Countries: Modernization of International Telephone Service, and Its Reaction on National Telephone Systems. E. P. G. Wright.....	4	436
Telephone Traffic: Portable Direct-Reading Traffic Recorder. August F. Jones.....	2	195
Textiles: Yarn-Numbering System. A. A. New.....	1	40
Theory and Design of the Reflectometer. B. Parzan and A. Yalow.....	1	94
Time-, Pulse-, Modulated Multiplex Radio Relay System—Radio-Frequency Equipment. D. D. Grieg and H. Gallay.....	2	141
Time-, Pulse, Modulation Link for Army Field Telephone System. N. H. Young.....	3	297
Traffic Recorder, Portable Direct-Reading. August F. Jones.....	2	195
Traffic Where Non-Equivalent-Choice Outlets Are Commoned, Behaviour of Telephone Exchange. E. P. G. Wright.....	1	42
Transmission Lines: Theory and Design of the Reflectometer. B. Parzan and A. Yalow.....	1	94
Transmitters for 88-108 Megacycles, Frequency-Modulated Broadcast. Leonard Everett.....	1	82
Transmitters: Frequency-Shift Keying in the I. T. & T. System.....	2	262
Transmitters, Medium-Power Multichannel Communication. B. T. Ellis.....	4	433
Triode for 600 Megacycles, Medium-Power. S. Frankel, J. J. Glauber, and J. P. Wallenstein.....	2	179
Triodes, Dimensional Analysis Applied to Very-High-Frequency. Gerard Lehmann.....	3	391
Triodes for 3- and 10-Kilowatt Frequency-Modulated Transmitters. P. I. Corbell, Jr. and H. R. Jacobus.....	2	187
Triple-Tuned Band-Pass Amplifiers, Exact Design and Analysis of Double- and. Milton Dishal.....	3	349
Tubes, Cathode-Design Procedure for Electron-Beam. Robert Helm, Karl Spangenberg, and Lester M. Field.....	1	101
Tubes: Control of Electron-Beam Dispersion at High Vacuum by Ions. Lester M. Field, Karl Spangenberg, and Robert Helm.....	1	108
Tubes: Dimensional Analysis Applied to Very-High-Frequency Triodes. Gerard Lehmann.....	3	391
Tubes: Medium-Power Triode for 600 Megacycles. S. Frankel, J. J. Glauber, and J. P. Wallenstein.....	2	179
Tubes: Triodes for 3- and 10-Kilowatt Frequency-Modulated Transmitters. P. I. Corbell, Jr. and H. R. Jacobus.....	2	187
Two-Phase Sine-Wave Generator, Variable-Frequency. T. H. Clark and V. F. Clifford.....	3	382
U.S.S.R., Carrier-Frequency Submarine Cable and Equipment for. E. S. McLarn and G. H. Gray.....	2	209
Variable-Frequency Two-Phase Sine-Wave Generator. T. H. Clark and V. F. Clifford.....	3	382
Very-High-Frequency Triodes, Dimensional Analysis Applied to. Gerard Lehmann.....	3	391
Waveguides, Anomalous Attenuation in. John Kemp.....	3	342
Wide-Band Amplifiers: Exact Design and Analysis of Double- and Triple-Tuned Band-Pass Amplifiers. Milton Dishal.....	3	349
Wide-Band Amplifiers: Medium-Power Triode for 600 Megacycles. S. Frankel, J. J. Glauber, and J. P. Wallenstein.....	2	179
Wind Velocities in U.S.A.: Pulse-Time-Modulated Multiplex Radio Relay System—Radio-Frequency Equipment. D. D. Grieg and H. Gallay.....	2	141
Yarn-Numbering System. A. A. New.....	1	40
30-44-Megacycle Equipment, Mobile Frequency-Modulation. R. B. Hoffman and E. W. Markow.....	2	170
88-108 Megacycles, Frequency-Modulated Broadcast Transmitters for. Leonard Everett.....	1	82
600 Megacycles, Medium-Power Triode for. S. Frankel, J. J. Glauber, and J. P. Wallenstein.....	2	179
3000-Megacycle Frequency-Modulation Radio Link, Paris-Montmorency. A. G. Clavier and G. Phelizon.....	2	159

AUTHOR INDEX

Barker, H. J., SOJ-12 Open-Wire Carrier Telephone Systems in South Africa.....	3	310
Belevitch, Vitold, Extension of Norton's Method of Impedance Transformation to Band-Pass Filters.....	1	59
Belevitch, Vitold, Insertion Loss and Effective Phase Shift in Composite Filters at Cut-Off Frequencies.....	2	192
Clark, T. H., Investigation of Errors in Spaced-Collector Direction-Finder Systems.....	2	199
Clark, T. H., Variable-Frequency Two-Phase Sine-Wave Generator.....	3	382
Clavier, A. G., Paris—Montmorency 3000-Megacycle Frequency-Modulation Radio Link.....	2	159
Clifford, V. F., Variable-Frequency Two-Phase Sine-Wave Generator.....	3	382
Colin, Robert I., Survey of Radio Navigational Aids.....	2	219

E L E C T R I C A L C O M M U N I C A T I O N

	NUMBER	PAGE
Corbell, P. I., Jr., Triodes for 3- and 10-Kilowatt Frequency-Modulated Transmitters	2	187
Deloraine, E. M., Technical Coordination on an International Basis in Communication and Allied Fields	1	55
Dishal, Milton, Exact Design and Analysis of Double- and Triple-Tuned Band-Pass Amplifiers	3	349
Ellis, B. T., Medium-Power Multichannel Communication Transmitters	4	433
Engel, J. S., Landing Aircraft with Ground Radar	1	72
Erikson, P. E., Comité Consultatif International Téléphonique	2	198
Everett, Leonard, Frequency-Modulated Broadcast Transmitters for 88-108 Megacycles	1	82
Field, Lester M., Cathode-Design Procedure for Electron-Beam Tubes	1	101
Field, Lester M., Control of Electron-Beam Dispersion at High Vacuum by Ions	1	108
Frankel, S., Medium-Power Triode for 600 Megacycles	2	179
Fromageot, A., France-England Submarine Cable (1939) and Paris-Calais Cable	1	24
Gallay, H., Pulse-Time-Modulated Multiplex Radio Relay System—Radio-Frequency Equipment	2	141
Glauber, J. J., Medium-Power Triode for 600 Megacycles	2	179
Gray, G. H., Carrier-Frequency Submarine Cable and Equipment for U.S.S.R.	2	209
Grieg, D. D., Pulse-Count Modulation	3	287
Grieg, D. D., Pulse-Time-Modulated Multiplex Radio Relay System—Radio-Frequency Equipment	2	141
Helm, Robert, Cathode-Design Procedure for Electron-Beam Tubes	1	101
Helm, Robert, Control of Electron-Beam Dispersion at High Vacuum by Ions	1	108
Hoffman, R. B., Mobile Frequency-Modulation 30-44-Megacycle Equipment	2	170
Jacobus, H. R., Triodes for 3- and 10-Kilowatt Frequency-Modulated Transmitters	2	187
Jones, August F., Portable Direct-Reading Traffic Recorder	2	195
Kemp, John, Anomalous Attenuation in Waveguides	3	342
Kidd, W., Operational Control of Electricity Supply Systems	3	324
Labin, E., Microwave Radio Relay Systems	2	131
Lehmann, Gerard, Dimensional Analysis Applied to Very-High-Frequency Triodes	3	391
Mann, F. J., Alexander Graham Bell—Scientist	1	3
Markow, E. W., Mobile Frequency-Modulation 30-44-Megacycle Equipment	2	170
McLarn, E. S., Carrier-Frequency Submarine Cable and Equipment for U.S.S.R.	2	209
McWhirter, E. M. S., Operational Control of Electricity Supply Systems	3	324
Meeuws, V. C., Flashing Signal for Railway Crossings	3	406
Mortiaux, Fernand, Speech-Input Equipment of Brussels Broadcasting House	4	415
New, A. A., Yarn-Numbering System	1	40
Parzan, B., Theory and Design of the Reflectometer	1	94
Pelaez, Carlos, Angola Radio Network	3	283
Phelizon, G., Paris—Montmorency 3000-Megacycle Frequency-Modulation Radio Link	2	159
Pratt, Haraden, Bikini Observations and Their Significance	1	66
Retief, D. P. J., SOJ-12 Open-Wire Carrier Telephone Systems in South Africa	3	310
Royden, George T., Simultaneous Radio Range and Radiotelephone Equipment	3	374
Shadowitz, A., Shunted-Amplifier Input Admittance	4	468
Silver, M., Monitor for Frequency-Modulation Broadcasting	4	428
Spangenberg, Karl, Cathode-Design Procedure for Electron-Beam Tubes	1	101
Spangenberg, Karl, Control of Electron-Beam Dispersion at High Vacuum by Ions	1	108
Tournier, Marcel, Physical Properties of Crystals and Their Symmetry	4	478
Van Dyck, Arthur, Bikini Observations and Their Significance	1	66
Wallenstein, J. P., Medium-Power Triode for 600 Megacycles	2	179
Wright, E. P. G., Behaviour of Telephone Exchange Traffic Where Non-Equivalent-Choice Outlets Are Commoned	1	42
Wright, E. P. G., Modernization of International Telephone Service, and Its Reaction on National Telephone Systems	4	436
Yalow, A., Theory and Design of the Reflectometer	1	94
Young, N. H., Pulse-Time-Modulation Link for Army Field Telephone System	3	297